REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

At the outset, appreciation is expressed to Examiner Huang for his time and attention during the interview conducted at the U.S. Patent and Trademark Office on May 1, 2009. The remarks below discuss the substance of the interview.

The dependency of Claims 25-28 has been changed as such claims were previously inadvertently dependent upon canceled Claim 15.

The claims currently pending in this application are Claims 13, 14 and 16-32. Of those claims, Claims 13 and 14 are the only independent claims.

As explained during the interview, the subject matter at issue in this application pertains to an on-vehicle radio device that acquires identification information to unlock a vehicle lock device from a portable radio device in which is recorded such identification information, wherein the acquisition occurs by radio communication with the portable radio device. Referring to Claim 1, the on-vehicle radio device comprises human detection means which detects a person, variable frequency signal generating means which generates a variable frequency signal for the radio communication, and band changing means which changes the frequency band of the signal generated by the variable frequency signal generating means in a case in which an on-vehicle radio device has not yet acquired the identification information recorded in the portable radio device when the person carrying the portable radio device having the identification information recorded therein is detected by the human detection means. A radio transmitting means transmits the signal generated by the variable frequency signal generating means, and a transmission characteristics changing means changes the transmission

characteristics of the radio transmitting means to transmission characteristics adapted to the frequency band of the signal generated by the variable frequency signal generating means changed by the band changing means.

Thus, as discussed during the interview, if the person carrying the portable radio device (i.e., the portable radio device in which is recorded the identification information) approaches the vehicle and is detected by the human detection means, yet the on-vehicle radio device has not yet acquired the identification information from the portable radio device, the band changing means changes the frequency band of the signal generated by the variable frequency signal generating means. It is thus possible to address a situation in which the environment or surroundings makes communication difficult. Upon changing the frequency band of the signal generated by the variable frequency signal generating means, the transmission characteristics changing means changes the transmission characteristics of the radio transmitting means to transmission characteristics that are adapted to the frequency band of the signal generated by the variable frequency signal generating means changed by the band changing means.

The Official Action sets forth an anticipatory rejection of independent Claim 13 based on the disclosure in U.S. Application Publication No. 2004/0178882 to Roz et al., and sets forth an obviousness rejection of independent Claim 14 based on the disclosure in U.S. Patent No. 6,091,343 to Dykema et al. in view of the disclosure in U.S. Patent No. 6,603,388 to Perraud et al.

As explained to Examiner Huang, Roz et al. discloses a keyless vehicle door unlocking system. The background discussion in Roz et al. discloses known systems of this type in which the control device located on the vehicle repetitively sends out an interrogation signal to obtain the identification information signal from

the transponder. The transponder then sends the identification information to the vehicle control device which, upon determining the correct identification information, unlocks the vehicle locks. The background portion of Roz et al. points out that this system requires excessive energy because the system repeatedly sends out the interrogation signal.

Roz et al. proposes a system in which the transponder 10 includes a high frequency transmission device 40, 41 that periodically transmits a high frequency signal to activate the low frequency transmission generator of the vehicle control device 12. In this way, the low frequency transmission mechanism of the control device 12 is able to remain inactive or deactivated until such time as the transponder 10 is sufficiently close that issuance of an interrogation signal from the low frequency transmission mechanism of the control device 12 is necessary.

As explained during the interview, this system disclosed in Roz et al. does not change the frequency band of the signal generated by a variable frequency signal generating means. Further, the system disclosed in Roz et al. does not change the frequency band of the signal in a situation in which the person carrying the portable radio device having the recorded identification information is detected by the human detection means yet the on-vehicle radio device has not yet acquired the recorded identification information from the portable radio device. Rather, the Roz et al.'s system merely issues low frequency and high frequency signals issued by the transponder and the control device.

To better set forth this difference between the on-vehicle radio device at issue here and the disclosure in Roz et al., Claim 13 is amended to make more explicit that which was implicit in the previous claim language -- that the variable frequency signal generating means generates a variable frequency request signal (i.e., the

signal which requests transmission of a signal that includes the identification information), and that the band changing means changes the frequency band of that request signal. In other words, the variable frequency signal generating means generates the request signal which requests the portable radio device to transmit its signal including the identification information, and it is the frequency band of this request signal that is changed by the band changing means when the on-vehicle radio device has not acquired the identification information recorded in the portable radio device when the person carrying the portable radio device having such identification information is detected by the human detection means. Quite clearly, as discussed during the interview, this is not the case with the system disclosed in Roz et al. Accordingly, withdrawal of the anticipatory rejection of independent Claim 13 is respectfully requested.

With respect to the rejection of Claim 14, the claimed on-vehicle radio device also comprises a variable frequency signal generating means that generates a variable frequency signal for radio communication, and band changing means that changes the frequency band of the request signal generated by the variable frequency signal generating means. In the claimed device here, the on-vehicle radio device also includes a radio wave measuring means that measures the radio wave intensity in outer space of the on-vehicle radio device for each of predetermined frequency bands. The band changing means then changes the frequency band of the signal generated by the variable frequency signal generating means to a frequency band in which the radio wave intensity of the on-vehicle radio device is lowest from amongst the predetermined frequency bands. The transmission characteristics changing means changes the transmission characteristics of the radio

transmitting means to transmission characteristics adapted to the frequency band of the signal changed by the band changing means.

The Official Action sets forth an obviousness rejection of independent Claim 14 based on the disclosure in U.S. Patent No. 6,091,343 to Dykema et al. in view of the disclosure in U.S. Patent No. 6,603,388 to Perraud et al.

As discussed during the interview, Dykema et al. does not really disclose a radio wave measuring means that measures radio wave intensity of the on-vehicle radio device for each of predetermined frequency bands. The Examiner commented during the interview that the antennae 130 in Dykema et al. might be considered a device that is capable of measuring radio wave intensity. However, the claim does not call for However, as explained during the interview, the claim does not recite that the radio wave measuring means is capable of measuring radio wave intensity of the on-vehicle radio device for each of predetermined frequency ban, but rather recites that the radio wave measuring means measures radio wave intensity of the on-vehicle radio device for each of predetermined frequency ban.

In addition, the combination of Dykema et al. and Perraud et al. does not disclose the claimed relationship between the measured radio wave intensity measured by the radio wave measuring means for each of predetermined frequency bands, the variable frequency signal generating means that generates the variable frequency request signal that requests transmission of a signal including the identification information, and the band changing means that changes the frequency band of such request signal to a frequency band that is lowest from amongst the predetermined frequency bands. Thus, even if it can be said that the antennae 130 in Dykema et al. is capable of measuring radio wave intensity, Dykema et al. does not disclose the claimed relationship between the radio wave measuring means, the

variable frequency signal generating means and the band changing means set forth in Claim 14. The claim is further distinguishable in that the wording is clarified in the same manner as Claim 13 to make clear that the variable frequency signal generated by the variable frequency signal generating means is the request signal that requests transmission of the identification information from the portable radio device, and to also make clear that the band changing means changes the frequency band of that request signal in the manner claimed.

It is thus respectfully submitted that independent Claim 14 is also allowable.

The dependent claims are allowable at least by virtue of their dependence upon allowable independent claims and so a detailed discussion of the additional distinguishing features recited in the dependent claims is not set forth at this time.

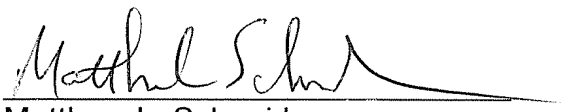
Early and favorable action concerning this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: May 11, 2009

By: 

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